

Planetary Lander “EGG DROP” Competition

Competition Date: May 3, 2014

Event: 9 AM-2pm (9:00 check-in)

Eligibility, Rules, Guidelines, Judging, Prizes

Eligibility:

1. Students from all Florida schools, both public and private, (including home schoolers and science groups), are eligible to participate and register student teams in the **Planetary Lander “Egg Drop” competition**. The competition will be divided into three (3) separate categories, provided 5 teams per category register in advance. There will be three award-winning category groups:

A. High School: B. Middle School: C. Elementary School

Rules:

1. Registration forms and non-refundable registration fees of \$35 must be submitted to Space Florida no later than COB 05/03/2014. No on-site registration or participation in the competition will be accepted.
2. The minimum number of students per team shall be three (3), with a maximum number of 7 (seven) students per team.
3. Teams will be categorized based on the majority grade of the team members
4. Each team must have a faculty advisor to supervise the completion of the **Planetary Lander**. 4. One advisor will be allowed per team. An advisor may not supervise more than three teams.
5. Any number of teams may register per school.
6. Registration will permit the competing students and the Advisor into the competition area. All efforts will be made to accommodate additional chaperones, parents and family members who wish to observe the Egg Drop competition, however, entrance to display judging may be limited by the organizers of the event.
7. The Planetary Lander may be physically designed in any format – for a Lunar, Martian or asteroid landing. A barrier will be set up to stop the Lander from wandering into the spectator area. Special Note: No balloon designs are acceptable as Landers.
8. The sponsors of the event – Space Florida, NASA-KSC and the Florida Department of Education may participate as competition judges. Registration in this competition automatically implies that the decision of the judges will be deemed final by all participants.
9. Teams are responsible for their own transportation and related expenses getting to the competition.

Guidelines: Planetary Lander Construction:

1. The Planetary Lander must be able to fit into an 10 inch x 10inch x 12 inch container and capable of carrying an ‘uncooked’ or raw egg onboard. The Lander (without the egg),

must not weigh in excess of 453.592 grams, or 1 pound in weight but the Lander must weigh more than 113.398 grams, or ¼ pound.

2. Parachutes will be allowed on the Lander; however, the diameter of the parachute should not be larger than 4 inches.
3. The Planetary Lander may be constructed of aluminum, wood, plastic, or cardboard/paper. The Lander may be constructed with foam variations however the foam may not equal more than 10% of the overall materials. All forms of aluminum, plastic, wood and soft foam are acceptable. There must be no foam in contact with the egg or plastic bag.
4. No food products are allowed in the construction of the lander or parachute.
5. Fasteners may include hot glue, white glue, aluminum wire, aluminum nuts, bolts and screws, gorilla glue, insulating foam in a can, but cannot make up the main structural features of the Planetary Lander.
6. Polyester pillow fill/quilting batting is not allowed. Cotton Balls are allowed however limited to 10.
7. The Planetary Landers for are scheduled to be dropped from a height of approximately twenty (20) feet onto a concrete landing surface. For maximum points, the Landers must land upright with the egg intact, with the hatch accessible.
8. Team members will be expected to drop their Lander onto the ground and pick them up afterwards, including assisting staff if an egg clean-up is necessary.
9. Landers will be weighed prior to being dropped and in the case of a tie by the judges, the lightest Lander will be declared the winner.
10. Team members will be provided 1 Grade A egg and 1 zip-lock bag (for the egg) on the day from recognized competition officials only.
11. Teams must provide judging panel with a materials list of all components used to construct the Lander (example provided online) and a photo of the Lander in the upright landing position. Each item must list the quantity or percentage used.
12. Prior to the "Egg Drop", team leaders will be expected to make a short informal presentation to the judges on the work they undertook in designing and building the Lander. (No power-points required). The use of tri-fold boards is recommended. The team will be evaluated on this presentation. Students may set up a display of their tri-fold boards showing their designs, with photographs etc, for viewing by the judges and other members of the public.